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POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

PERIODIC REPORTING (UPS PROPOSALS ONE, TWO, AND THREE)	Docket No. RM2016-2

INITIAL COMMENTS OF THE UNITED STATES POSTAL SERVICE ON UPS PROPOSALS ONE AND TWO

(January 25, 2016)

On October 8, 2015, UPS sought initiation of this proceeding by filing a petition to consider three proposals regarding postal costing methodologies. In Order No. 2793 (Oct. 29, 2015), the Commission announced its intent to proceed with Proposals One and Two, but to defer consideration of Proposal Three. Order No. 2793 set January 20, 2016, as the deadline for initial comments on Proposals One and Two, but Presiding Officer's Ruling No. RM2016-2/2 (January 14, 2016) extended the deadline to January 25, 2016. The Postal Service hereby provides its initial comments on those two proposals. Accompanying these comments is an "Analysis of UPS Proposals One and Two, and the Supporting Report of Dr. Kevin Neels" (Bradley Analysis), prepared by Professor Michael Bradley of George Washington University.

INTRODUCTION

The instant comments address UPS Proposals One and Two. Both of those proposals should be rejected. Their adoption would result in a costing approach that:

- would be inconsistent with the statutory provisions requiring "reliably identified causal relationships" between costs and products;
- would be inconsistent with decisions and practices of the very regulatory agencies that UPS attempts to invoke;

- would be inconsistent with economic theory applicable to multi-product firms with economies of scale and scope;
- would have been developed through the application of woefully deficient econometrics, mechanistically employing inadequate and misunderstood data; and
- would be inconsistent with common-sense business practices.

Each of these points is fully addressed in the Analysis by Professor Bradley, and further addressed below, but the final point bears emphasis here. The UPS proposals use misleading and erroneous arguments to misallocate costs to competitive products. It is apparent that, despite cloaking its proposal in supposed economic theory and econometrics, the primary goal of these proposals is to raise competitive costs and prices, to the advantage of UPS. Proposal One appeals to computationally complex game theoretic results which, even had they been applied correctly, would not lead to causal allocations of costs as required by the PAEA. Proposal Two relies on demonstrably weak econometrics: time series regressions using a single explanatory variable and only eight data points. UPS's extensive mischaracterizations of cost concepts and methods applied by the Postal Service and the Commission for measuring volume-variable and incremental costs, and its careless treatment of the data used in the regression analysis, indicates a complete lack of understanding of the underlying cost methods and cost drivers for the cost components being analyzed.

Although the analysis is weak from an analytical and econometric standpoint, its foundational shortcomings extend beyond that. In his desire to reclassify costs as being "hidden variable," Dr. Neels enters his data by rote and accepts his econometric results without any meaningful consideration of the actual nature of the costs within those components, or serious consideration of whether his results are consistent with the real-world activities that caused those costs to be accrued. Dr. Neels seems to lose track of the fact that the accrued costs that are grouped in each cost component represent real expenses incurred by real people engaged in the real conduct and support of the real business of delivering the mail. Even cursory review of the nature of the actual activities that gave rise to the supposedly "hidden variable" expenses in certain cost components indicates Dr. Neels's approach and interpretation of results is fatally flawed.

In this respect, elements of the UPS proposals are reminiscent of the work of Officer of the Commission witness Blackwell in Docket No. R76-1. In that proceeding, the Commission rejected Mr. Blackwell's reliance on econometric techniques "divorced from operations analysis," concluding that what the analysis lacked "was a sound understanding of the operational logic underlying the modeled relationship." PRC Op. & Rec. Dec., PRC Docket No. R76-1 (June 30, 1976), vol. 1 at 84, 92. The Commission agreed with the assessment that:

> [B]efore there is resort to mathematical models, there must be a careful and logical review of the theoretical and practical considerations surrounding the data. And once the equation has been applied, the resulting estimates must withstand reasonable testing.

Id. at 87. Ultimately, the Commission concluded that the "need remains in many areas of postal costing for judgments soundly based on analysis of postal operations assisted by functional data and relevant economic concepts." *Id.* at 96. The UPS proposals are diametrically at odds with that approach. Instead of the careful component-by-component approach jointly developed by the Commission and the Postal Service and interested parties over many decades, UPS's one-size-fits-all analysis treats widely disparate functional components as if their cost-generating processes were identical. The over-simplistic methods in Proposals One and Two come nowhere near reaching the level of support necessary to justify wholesale abandonment of key theoretical and empirical findings developed and refined over many years. That is particularly true given the conflict between those proposals and the legal standards for costing established by Congress, and given the cost properties of multi-product firms with economies of scope, scale, and density, as Professor Bradley demonstrates.

In addition to presenting unacceptable costing proposals, the evidence does not support UPS's allegations that skewed cost attribution is enabling anticompetitive practices. UPS stands reality on its head when it portrays the Postal Service as gouging market dominant mailers in order to "slash" competitive product prices; in fact, the history of post-PAEA pricing shows that competitive product prices have risen significantly faster than market dominant ones. As for UPS's attempt to connect decreases in select Priority Mail price cells in September 2014 with changes in its and FedEx's volume growth and market share, various elementary flaws in UPS's "Market Share Analysis" data render it incapable of supporting UPS's story. Moreover, to the extent that anything can be gleaned from UPS's data, it is that the offending market changes coincide with various potential causes beyond the Postal Service's limited price decreases, including a strong holiday season and the expansion of UPS and FedEx's Ground dimensional weight pricing.

Finally, UPS's credibility suffers from its disingenuous responses to topics addressed in Chairman's Information Requests, including other regulators' consideration (or, more accurately, rejection) of Shapley values, the costs of the universal service obligation, and the value and relevance of the postal monopolies and "implied subsidies."

I. THE UPS PROPOSALS CONFLICT WITH PLAIN STATUTORY LANGUAGE, LEGISLATIVE HISTORY, AND DECADES OF JUDICIAL AND REGULATORY PRECEDENT

A. Governing Law Precludes the Commission from Adopting Proposals One and Two

Proposals One and Two attempt to reverse the long-standing principle, well-established in both law and Commission practice, that cost attribution must be based on reliable causal relationships between costs and products. Proposal One seeks the allocation of all variable costs within certain cost components, regardless of causation. As Professor Bradley demonstrates in his Analysis, Proposal One essentially proposes replacing the established methodology for those components with a fully distributed costing scheme. Proposal Two would compound the problem by attributing certain remaining institutional costs on the basis of a poorly conceived and poorly executed econometric analysis that does not reliably establish causal relationships between the costs and products, either individually or as groups. As such, Proposals One and Two run counter to the plain language and legislative history of the governing statute, and they are inconsistent with the basic methodological principles that the Commission and courts have established over the past four decades.

In enacting the PAEA, Congress required each market dominant mail class or "type" and each competitive product to cover its attributable costs: that is, the "direct and indirect postal costs attributable to such product <u>through reliably identified causal relationships</u>." 39 U.S.C. § 3622(c)(2) (emphasis added); *accord id.* §§ 3631(b), 3633(a)(2). This key phrase essentially codifies the (pre-PAEA) Postal Rate Commission's long-standing principle that costs may only be assigned to individual mail products on the basis of "reliable causal relationships." *See, e.g.*, Op. & Rec. Dec., PRC Docket No. R84-1 (Sept. 7, 1984), at 116-19. The reliable-causation principle was further entrenched by the U.S. Supreme Court's opinion in *National Association of Greeting Card Publishers v. USPS* ("*NAGCP*"), 462 U.S. 810 (1983). Upon an exhaustive review of the relevant Postal Reorganization Act provisions and legislative history, the Court rejected the lower court's attempt to require attribution of costs based on "unsupported inferences," rather than on "an established causal basis." *Id.* at 826-34. The Court equated the lower court's invalid approach with the sort of "fully allocated costing" used by certain other utility regulators, *id.* at 817 n.7, and in subsequent proceedings, the Commission treated fully distributed costing as a standard for the sort of "uncritical and arbitrary" methodology to be avoided. Op. & Rec. Dec., PRC Docket No. R84-1, at 128-30.

It was this history that the PAEA's framers had in mind when they not only maintained the statutory language that had animated *NAGCP* and the Commission history, but augmented it with the very phrase that Commission and Court alike had made their watchword: "reliably identified causal relationships." Lest there be any doubt, the Commission's long-standing methodology is now spelled out explicitly in the statute, and with it a repudiation of fully distributed costing and other methodologies that favor inference over evidence. As both the House and Senate committee reports make clear, Congress properly insisted on maintaining the Commission's methodology, instead of heeding those who sought a particular outcome:

> In addressing the attributable costs, the Commission should continue to focus on the need to have reliable indicators of cost causality. This committee heard testimony from different viewpoints, with some urging a higher attribution of costs. The goal of the Commission should be a technically correct result, placing accuracy above achieving a particular outcome of higher or lower attribution.

H.R. Rep. No. 109-66, pt. 1, at 49 (2005).

> While considering this legislation the Committee heard testimony suggesting that currently accepted levels of cost attributions were both too low and too high, and that specific rules for cost attribution should be incorporated into law. The Committee has decided that the technical decision of what cost analysis methodologies are sufficiently reliable at any given time to form the basis for attribution should be left to the Postal Regulatory Commission, acting with benefit of counsel from all interested persons in open public proceedings. . . .
>
> The current analysis has been guided by a Supreme Court decision, *National Assoc. of Greeting Card Publishers v. USPS*, 462 U.S. 810, 829-34, [sic] (1982), that carefully analyzed how the term attributable should be interpreted. This definition has been further refined by U.S. Courts of Appeals and is well understood in the industry. The NAGCP Court rejected a contention that it was appropriate to make classes responsible for the recovery of costs for which an extended inference of causation was claimed. It emphasized the need for reliable indicators of causality without specifying any specific method for identifying causality. Governed by this ruling since 1982, the Postal Rate Commission must have reasonable assurance that any costs attributed to a class of mail are incurred as a result of providing that class of mail. The Committee finds no reason for changing this standard.

S. Rep. No. 108-318, at 9-10 (2004). Even though the Senate Committee believed that the costing methodology could be refined, the Committee disavowed an intent that

> the Postal Service should strive to attribute 100 percent of its costs, or any other arbitrary percentage. We also do not believe that the Postal Service should be forced to attribute such a large percentage of its costs to competitive products that those products will no longer be affordable and will no longer be made available to the customers who need them, particularly those customers living in parts of the country that are not well-served by the Postal Service's private sector competitors.

Id. at 30. In clear contrast to UPS, the Senate Committee was explicit in its desire not to sacrifice competitive products' affordability and accessibility on the altar of maximum cost attribution. In the end, the Senate Committee entrusted the incremental improvement of cost attribution to ongoing study by the Postal Service, the Commission, and the Treasury Department. *Id.*

The course of that study uncovered no challenge to the Commission's long-standing methodology for allocating costs – perhaps unsurprisingly, given the plain language of the PAEA. Among its requirements for competitive product cost accounting, the Treasury Department prescribed that each competitive product must be priced "above its volume-variable or marginal cost" and that "each competitive product's revenues exceed its incremental costs" in order to guard against cross-subsidies.[1] The Treasury Department noted that the PAEA's definition of "costs attributable" "is consistent with the economic costing approach of the current USPS cost system," and it recommended that

> [t]he volume-variable or marginal product costs reported by the USPS cost system should be used . . . to ensure that the competitive products cover their attributable costs. The reported incremental costs should be used to ensure that cross-subsidization of the competitive products by the market-dominant products is not occurring.

Id. at 7. In the Commission's subsequent proceeding about the Treasury Department's recommendations, UPS voiced its

> support [for] the Commission's decision to adopt its long-standing method of attribution. Commission Order No. 26 (August 15, 2007), ¶ 3045. The Commission has long interpreted this to include not only volume variable costs, but also specific-fixed costs and anyother [sic] non- volume [sic] variable cost that can be causally related to a product. See, e.g., Docket No. R97-1, Commission Opinion and Recommended Decision (May 11, 1998), ¶ 4017.

Comments of United Parcel Service on the Treasury Report, PRC Docket No. PI2008-2 (Apr. 1, 2008), at 2. UPS went on to "agree[ ] with Treasury that the Commission should apply" the incremental cost test as the determinant of cross-subsidy, based in part on UPS's equation of incremental costs with "attributable" costs. *Id.*

[1] Report of the U.S. Department of the Treasury on Accounting Principles and Practices for the Operation of the United States Postal Service's Competitive Products Fund (2007), at 4-5, *available at* http://www.prc.gov/sites/default/files/archived/Postal_FINAL_5pm.pdf.

Thus, it is apparent that, in the months immediately following the PAEA's codification of the Commission's reliable-causation principle, both the Treasury Department and UPS itself agreed that attributable costs should encompass volume-variable (marginal) costs, as well as product-specific costs that, in UPS's words, "can be causally related to a product," and that incremental costs were the proper basis to test for cross-subsidies. Nobody suggested – nor could they plausibly have – that the PAEA stood for the sort of abandonment of long-standing principle that UPS now advocates, whereby costs are to be assigned on the sheer basis of oversimplified regressions and fully distributed costing in the alleged guise of Shapley values.

B. UPS Has Been Unable to Point to a Single Example of a Regulator Using Shapley Values to Allocate Costs

Beyond the Commission's own governing law, UPS grasps at straws in its attempt to find another example of a regulatory body that follows its preferred approach. In response to a direct question on the subject, UPS could not point to a single example of another regulator that "directly applies" the sort of quasi-"Shapley values" methodology that it advocates here; instead, UPS could only resort to a conspicuous use of passive voice, in reference to situations where Shapley values were "expressly considered" or "explicitly recommended or used." United Parcel Service, Inc.'s Response to Chairman's Information Request No. 4 [hereinafter "UPS ChIR 4 Response"], PRC Docket No. RM2016-2 (Jan. 8, 2016), at 6.

Notably absent from UPS's careful phrasing is what each cited regulator ultimately did with those recommendations: reject them. For example, the only UPS citation that pertains to a federal regulatory is a single public comment in a Federal Communications Commission (FCC) proceeding that discussed Shapley values, among other things.[2] UPS fails to note that, although the FCC discussed other aspects of that comment in its eventual rule, it declined even to acknowledge the commenter's discussion of Shapley values. *See generally* Connect America Fund; High-Cost Universal Service Support, 28 F.C.C.R. 5301 (2013).

Similarly, the state regulatory opinions that UPS cites explicitly rejected proposals based on Shapley values, characterizing them as fatally rife with "uncertainties and infirmities"[3] and "arbitrary."[4] Indeed, the Maine Public Utilities Commission's critique of a Shapley values-based proposal is particularly relevant here:

> The Shapley value analysis reflects principles of cost allocation, rather than principles of incremental cost measurement associated with an individual service. The Shapley value analysis assigns a portion of joint and common costs to each service. While an analysis of this kind may provide some guidance in evaluating the equities of dividing revenue requirements, <u>it sheds little light on the analysis of cost causation.</u> . . . <u>The Shapley value analysis shares many of the problems associated with all methods of joint and common cost allocation, . . . which are by their nature arbitrary to some degree.</u>

1994 Me. PUC LEXIS 9, at *68-*69 (emphasis added). Far more than simply having "expressly considered" a Shapley values-based proposal, the Maine Public Utilities Commission held that Shapley values had little to do reliably identified causal relationships: the very standard that governs this Commission's authority over postal costing methodologies.

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[2] *Id.* at 6 fn.5 (citing Comments of the National Association of State Utility Consumer Advocates on Model Design and Data Inputs for Phase II of the Connect America Fund, WC Docket Nos. 10-90 & 05-337 (July 9, 2012), *available at* http://apps.fcc.gov/ecfs/document/view?id=7021984653).

[3] Investigation Into New England Telephone Company's Cost of Service and Rate Design, No. 92-130, 1994 Me. PUC LEXIS 9, at *70 (Apr. 13, 1994).

[4] Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Service, Nos. 93-04-002 & 93-04-003, 2003 Cal PUC LEXIS 80, at *55 (Jan. 30, 2003).

Moreover, for all of UPS's lengthy discussion of the Surface Transportation Board (STB) and its predecessor, the Interstate Commerce Commission (ICC), as "an example of a regulator relying on cost measures computed in a manner consistent with the use of the Shapley Value," UPS ChIR 4 Response at 6, this comparison is inapt for a few reasons. First, the STB has not possessed the authority to regulate minimum rates for over two decades. ICC Termination Act of 1995, Pub. L. No. 104-88, § 102(a), 109 Stat. 803, 804 (repealing former 49 U.S.C. § 10701a(c)); H.R. Rep. No. 104-311, at 82-83, 97 (1995). Minimum rates are what this proceeding about cost allocation is ultimately about, since market dominant and competitive product prices are subject to requirements that they cover the attributable cost allocated to each product. 39 U.S.C. §§ 3622(c)(2), 3633(a)(2). Whatever costing methodology STB uses, it has no bearing on the sort of minimum-rate regulation at issue here.

Second, a careful reading of the relevant statutes belies UPS's claim that the ICC/STB and Commission operate under "similar" legislative standards. *Id.* at 8. The Staggers Rail Act, which governed the ICC when it originally promulgated its Uniform Rail Costing System (URCS), dictated merely that costs need be "associated with particular movements of goods." 49 U.S.C. § 11162(a) (1989). This is broader than the standard that Congress specified for postal costing: "direct and indirect postal costs attributable to such product through reliably identified causal relationships." 39 U.S.C. §§ 3622(c)(2), 3631(b) (emphasis added). While the Staggers Rail Act's "associated with" standard may be broad enough to accommodate fully distributed costing and other non-causal methodologies, the specific text and legislative, judicial, and regulatory history of the postal regulatory statutes simply does not give the Commission the same latitude. It bears noting that, when the ICC did have the authority to regulate minimum rates, it did so under a standard that was indeed similar to the Commission's: "directly variable costs," which were essentially short-run marginal costs, Coal Rate Guidelines, Nationwide, 1 I.C.C.2d 520, 537 fn.41, 540-41, 553 (1985), and far from any sort of "cost measures computed in a manner consistent with the Shapley Value." *See* UPS ChIR 5 Response at 6.

Third, the STB's use of "average variable cost" computed according to its URCS, to which UPS alludes, is confined to circumstances not relevant here, such as determining whether a rate is subject to regulation on the basis of the relevant railroad's market dominance. *See* BNSF Ry. Co. v. Surface Transp. Bd., 526 F.3d 770, 774-76 (D.C. Cir. 2008). Neither the ICC nor the STB has relied on fully distributed costing (which is, in essence, what UPS's version of "Shapley values" amounts to) in either minimum or maximum rate regulation since 1985.[5]

Finally, to the extent that the STB does use average variable costs in certain (inapposite) contexts, it should also be noted that the STB has expressed interest in rethinking its approach to general attribution of variable costs, and it has acknowledged critiques of its costing system that stem from its lack of adherence to an economic (that is, a marginal or incremental) cost methodology.[6] For all of these reasons, UPS's invocation of the STB furnishes no basis for the Commission to depart from its well-

[5] 1 I.C.C.2d at 523, 526-28; *see also* John W. Mayo & David E.M. Sappington, Regulation in a "Deregulated" Industry: Railroads in the Post-Staggers Era (2015), at 7, http://www.gcbpp.org/files/Railroad/Mayo.SappingtonPaper.pdf.

[6] Surface Transp. Bd., Report to Congress Regarding the Uniform Rail Costing System (2010), at 28-32, https://www.stb.dot.gov/stb/docs/URCS/URCS%20Report%205.27.10.pdf.

established approach to reliable cost causation, to which the Commission is bound by statute.

II. THE COST ALLOCATIONS GENERATED BY PROPOSAL ONE WOULD NOT BE BASED ON "RELIABLY IDENTIFIED CAUSAL RELATIONSHIPS"

In Proposal One, as the very title of the document suggests, UPS purports to "attribute all variable costs caused by competitive products to competitive products using existing distribution methods." In fact, the proposed methodology fails to implement causal economic costs—marginal or incremental costs—by improperly distributing common costs to individual products. It also fails to properly implement its non-causal allocation of costs based on Shapley values, as there are systematic differences between true Shapley costs and a shortcut proposed by Dr. Neels to avoid the otherwise intractable computational complexity of the Shapley values. The result is a simplistic, goal-oriented, distortionary cost allocation scheme that abandons the long-standing costing principle of causality. Although UPS's avowed goal is to redress a perceived (albeit mistaken) belief that attributable costs for competitive products are understated, the result of Proposal One would be a misallocation of Postal Service costs that would produce misleading product costs for both competitive and market dominant products.

In its effort to raise competitive product costs, UPS has proposed replacing a sound and rational product costing methodology, comprehensively and continuously reviewed over many decades, with an arbitrary and unreasonable allocation algorithm. UPS provides no valid basis for overturning the attributable cost methods developed by the Postal Service, the Commission, and numerous other stakeholders over the years. Moreover, given that the Commission tests for cross-subsidy between the

Market Dominant and Competitive product baskets using a conceptually correct incremental cost analysis, any concern that Market Dominant products cross-subsidize Competitive products is unfounded.

As explained in great detail in the Analysis prepared by Professor Bradley accompanying these comments, UPS's analysis often misapplies economic cost concepts applicable to a single-product firm, incorrectly assuming that those economic concepts apply to a complex, multiproduct firm like the Postal Service. The resulting cost measures are neither fish nor fowl – they are not marginal costs or incremental costs. Consequently, the proposed UPS costs are not appropriate as the basis for setting prices, nor are they appropriate as the cost floor for testing for cross-subsidy.

Proposal One attempts to reverse the long-standing, established Commission methodology of finding a cost component's volume-variable costs and then distributing those costs to the products that caused them to arise. For those cost components to which it would apply, Proposal One seeks to replace the established methodology with a fully distributed costing scheme that would allocate virtually all component costs to products, whether those costs are volume-variable or institutional. This proposal ignores the key fact that the Postal Service is subject to economies of scale, density, and scope: a fact that implies that not all of the Postal Service's variable costs are caused by individual products.

In its attempt to justify its arbitrary allocation scheme, UPS mistakenly claims that any cost that is variable should be attributed to individual products. Proposal One at 12-13. As convincingly explained by Professor Bradley, UPS's assertion is simply not true in a multiproduct firm like the Postal Service. Bradley Analysis at 7. This is an example of UPS mistakenly applying the economics of a single-product firm to the Postal Service. The long-established PRC/Postal Service costing methodology appropriately recognizes that institutional costs should not be attributed to products as volume-variable costs, no matter whether they are, in the textbook sense, either fixed *or* variable. The incremental cost calculation for competitive products, however, already correctly includes the portion of inframarginal costs caused by competitive products. UPS fails to present any economic theory, operational justification, or reliable statistical basis for overturning the established methodologies for developing either attributable or incremental costs.

UPS attempts to buttress its arbitrary allocation scheme by linking it to game-theory results called Shapley values. Proposal One at 23-24. UPS attempts this linkage because, as Professor Bradley explains, under certain circumstances, Shapley values produce subsidy-free cost allocations that are the same as those that would emerge from a cooperative bargaining process among product managers. Bradley Analysis at 22-24. But achieving those conditions requires strict limitations on the way that product managers think and interact, in ways that are extremely unlikely to hold for the Postal Service. When those restrictive conditions do not hold, the theoretical advantages of Shapley values disappear. *Id.* It is also important to recognize that Shapley values come in to play only after a decision has been made to arbitrarily (i.e., non-causally) assign common costs to products. *Id.* at 24. Shapley values are just one of an infinite number of possible allocations of common costs and do not depend upon a causal link between products and their assigned costs. *Id.*

But UPS does not actually apply Shapley values to Postal Service costs, perhaps because doing so would be computationally infeasible given the number of postal products. Thus, even if the use of Shapley values would be theoretically applicable, the use would not be practicable. Although UPS at first claimed to be applying Shapely values, Proposal One at 24, UPS backed off that claim in its response to Question 2 in ChIR No. 4. There, UPS asserted merely that what it was proposing was "consistent" with Shapley values. UPS Response to ChIR No. 4, Question 2 (Jan. 8, 2016), at 5. As demonstrated by Professor Bradley, even this latter claim is false. Proposal One is simply a fully distributed costing algorithm that produces costs inconsistent with those derived using Shapley values. Bradley Analysis at 31-35.

Another important concern about Proposal One is that it is based upon an unfounded assumption regarding the model that the Postal Service uses to calculate incremental costs, and Proposal One thereby fails to constitute a demonstrably reliable cost methodology. For the purpose of calculating incremental costs, the Postal Service assumes that cost components can be modeled as if they had a constant elasticity function. Bradley Analysis at 37. In reality, the cost components do not have constant elasticity functions. Instead of using the actual estimated cost functions, the incremental cost model uses just the elasticities from those functions, and assumes a constant elasticity form. This constant elasticity approximation is acceptable for incremental cost calculations because, for all products, those calculations take place in the portion of the cost function near current volume levels. Research has shown that the constant elasticity assumption is acceptable in that region of volume.[7] That does

[7] For research on the applicability of the constant elasticity approximation for calculating incremental costs. see Michael D. Bradley, Jeff Colvin, and John C. Panzar, *Issues in Measuring Incremental Cost in a Multi-Function Enterprise*, in MICHAEL CREW & PAUL KLEINDORFER (EDS.), MANAGING CHANGE IN THE POSTAL AND DELIVERY INDUSTRIES 3-21 (1997).

not mean the approximation is acceptable for levels of volume far away from current levels. UPS's calculations require being able to compute costs reliably over the entire cost function. Thus, perhaps unknowingly, UPS must assume that the constant elasticity approximation is valid, even near zero volumes, when it uses the approximation to calculate inframarginal cost at all volume or output levels. In reality, UPS does not know how inframarginal costs behave at volume levels far from current levels, and UPS has produced no evidence that the constant elasticity approximation is appropriate for that exercise. If the UPS approximation is, in fact, inaccurate, Proposal One may include gross computational errors.

Moreover, beyond *potential* computational errors on theoretical grounds, Professor Bradley identifies *unambiguous* computational errors emanating from Dr. Neels' failure to carefully review the actual details of the current PRC/USPS costing presentations. These errors are large: the inframarginal costs that Dr. Neels attempts to calculate are overstated by billions of dollars, resulting in a claimed impact on competitive product costs that is nearly double the impact that would have been estimated if he had actually implemented the methodology he intended to propose. Professor Bradley discusses and quantifies these errors on pages 36-37 of his Analysis. The scope of the endeavor that UPS has purported to undertake – a complete replacement of the long-established conceptual and empirical foundations of postal costing – is vast. The major computational errors undermining Proposal One demonstrate conclusively that UPS has failed to pay scrupulous attention to each step of the expansive process that its stated objective requires, perhaps because the desire to reach a pre-ordained result overwhelmed the inclination to conduct the necessary due diligence. Of course, attempting to correct the erroneous application of Shapley values and the inappropriate adaption of the Postal Service's incremental costing methodology could still not change the reality that the established PRC/Postal Service costing methods already capture all costs that can be reliably, causally linked to products, and even the perfect application of Shapley values would be a detriment to the goal of proper cost attribution.

Proposal One's invalidity is apparent upon careful examination of the various attempts that UPS makes to rationalize it. On page 3 of Proposal One, UPS claims:

> The Postal Service distributes the marginal cost rectangle among the various individual products by using established tools for assigning cost drivers to products called "distribution keys." Figure 1-2 illustrates how this works, using an example with four products.

Figure 1-2 on page 4 incorrectly depicts the distribution of volume-variable costs as if it were done in a particular order, with some products getting their portion of the costs "first" and other products getting their portion of the costs "last." This is misleading, as it does not reflect the fact that the distribution of volume-variable costs is done <u>simultaneously</u> to all products. There is no ordering in the distribution of costs to products in the calculation of marginal costs. This lack of ordering is important, because UPS later relies upon this misleading visual imagery as a way of justifying the distribution of inframarginal costs to products.

Next, on page 4, UPS alleges (with the emphasis in the original):

> By limiting attribution to the marginal cost rectangle, the Postal Service effectively assumes that the cost associated with adding the <u>last</u> unit of mail is identical to the cost associated with adding <u>each and every</u> unit of mail.

This statement is completely unsupported and unquestionably false. The Postal

Service is well aware that its cost structure includes marginal costs that vary with volume. For example, see the Postal Service's response to Question 1 of ChIR No. 2 (December 10, 2015). When calculating the incremental cost of competitive products, the Postal Service explicitly recognizes that the marginal cost of cost drivers increases as volume declines.[8] The Postal Service also knows that, in order to maintain financial stability, its rates must be sufficient to cover all of the cost of production of all of the volumes it handles. But such a revenue requirement does <u>not</u> mean that all of the costs of providing service on all those pieces should be included in the calculation of <u>marginal</u> cost. UPS is denying the importance of a fundamental economic precept: marginal analysis. Many times, it is important to make decisions at the margin. According to the UPS view of costs, airlines would be forced to charge the same price for all tickets on a given flight, as they would not be able to base pricing on marginal costs. Marginal analysis is as appropriate for the Postal Service as it is for airlines.

In footnote 4 on page 5, UPS states:

> As noted, inframarginal costs primarily arise in "constant elasticity" cost segments, such as City Carrier Street Time. The complexity of Postal Service costing and the variety of models applied to various cost components partially explains why the concept of inframarginal costs has not been well understood to date.

The first sentence belies a fundamental misunderstanding of the Postal Service's product cost system. Despite claiming to have undertaken an "exhaustive" analysis of the Postal Service cost system (UPS Petition at 5), UPS still makes serious errors in describing it. As UPS should know from its intense participation in Docket No. RM2015-7 (the recent rulemaking on city carrier street time costing methodology), the

8 *See* Summary Description of USPS Development of Costs by Segments and Components, FY2014 (July 1, 2015), at H-1.

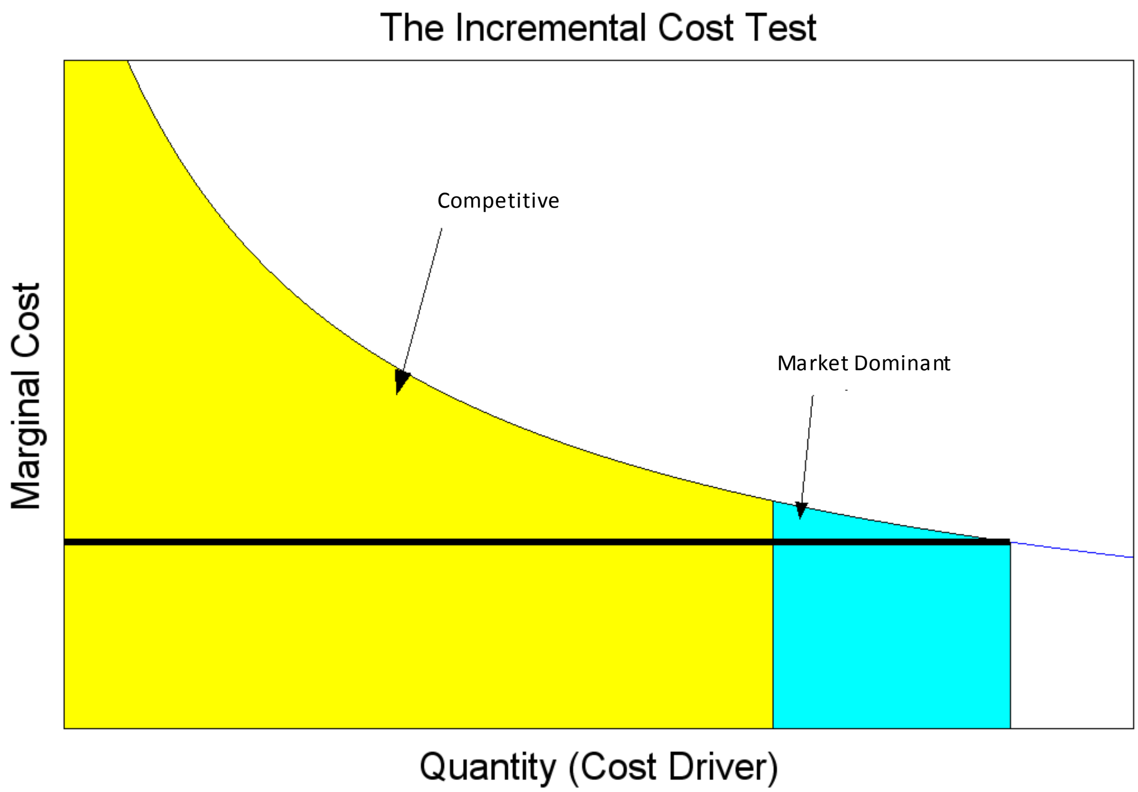
equation for city carrier street time has a quadratic form, which has a <u>non-constant</u> elasticity. The second sentence of the above quote reveals much about UPS's misunderstanding of the Postal Service costing system. Only UPS fails to understand inframarginal costs. They have been well understood for many years, both by the Postal Service and, as illustrated in the literature cited above, by academic economists.

On page 10 of Proposal One, UPS addresses the incremental cost test:

> Since the test is concerned with the impact of the Postal Service exiting the competitive products business, it proceeds by subtracting the costs of competitive products from the tail end of the constant elasticity curve (that is, by moving from right to left along the curve). Accordingly, market dominant products are assumed to come "first" on the curve and competitive products are assumed to come "last." This approach results in a very small sliver of the least expensive inframarginal costs (*i.e.*, those at the end of the curve) being assigned to competitive products as a group for purposes of this test.

This is a complete misstatement of the incremental cost test which, contrary to the statement, starts at the current level of volume to measure the inframarginal costs of <u>all</u> products. It does <u>not</u> assume that market dominant products come "first" and are the "most expensive" products. If the Postal Service were to calculate the incremental costs of a market dominant product, then it would also receive what UPS calls the "small sliver" of costs to which UPS refers. The incremental cost of a product, by definition, is the change in total cost arising from adding that product to the mix of products. It is thus necessary to begin the measurement of incremental costs for each product, market dominant or competitive, at the current level of volume. Bradley Analysis at 21. To "support" its erroneous assertion, UPS presents Figure 1-5, which allegedly shows the ordering of market dominant and competitive products in the incremental cost development process. In actuality, there is no ordering of product under the marginal cost curve, so an equally valid version of Figure 1-5 would look like the following figure. It shows a stylized incremental cost for a market dominant product.

Revised Figure 1-5



On page 11, UPS takes another crack at the Incremental Cost Test:

> In particular, [the incremental cost test] does not address the question of whether competitive products are covering all of the variable costs that can be reliably attributed to those products. This is because, as Figure 1-5 illustrates, the Incremental Cost Test assigns the "more expensive" variable costs associated with earlier units of volume to market dominant products and the least expensive variable costs associated with later units of volume to competitive products. By doing so, the test assumes that the market dominant products are funding the infrastructure that creates economies of scale, and then competitive products are riding for free (or nearly free) by covering only the tail-end of the marginal cost curve.

Once again, this is a complete mischaracterization of the incremental cost test. That test does not, as UPS avers, place the products in a specific order for calculating incremental costs. Moreover, the incremental cost test does not assign “more expensive” marginal costs to market dominant products than it does to competitive products. As the name suggests, incremental costs are the additions to total cost that arise from producing individual products. To accurately calculate how much cost a specific product creates, one must calculate and compare the firm’s total cost before and after the specific product is included in the firm’s output mix. The incremental cost is the difference between the two. Thus, for any given product – whether market dominant or competitive – the inframarginal costs associated with that product are included in the incremental cost for that product. This procedure for calculating incremental costs is followed for all products, so the incremental cost test makes no assumptions about which products come “first.” Fundamentally, the costs UPS complains are not assigned in the incremental cost measure are costs that the Postal Service would continue to incur even if it did not provide the competitive products, or equivalently costs that are not avoidable if competitive products were withdrawn; such costs have, in short, no causal link to competitive products. By the same token, the incremental cost test makes no assumptions about which products are “funding” the infrastructure. If the addition of a particular product causes a firm’s infrastructure cost to rise, then that additional infrastructure cost will be included in that product’s incremental cost. Finally, the incremental cost test ensures that an individual product’s revenue exceeds the total cost caused by the product and, therefore, that the product is not receiving a cross-subsidy.

An erroneous statement that goes to the heart of the misguided nature of

Proposal One is the UPS claim on page 13:

> Inframarginal costs are variable costs — they are causally related to volume.

This misstatement underlies much of UPS's misunderstanding of how to attribute costs in a multiproduct firm. Professor Bradley convincingly explains that in a multiproduct firm, the fact that a cost is variable does not, in itself, justify attributing the cost to products. Bradley Analysis at 8. Rather, a causal link between the product and the resulting cost must be established. Proposal One fails to establish that causal link and thus fails to appropriately attribute costs to products. It may be that a cost is driven by total volume of all products without being attributable to any individual product. Such an outcome reflects the very essence of a common input. In a cost component without any fixed cost, inframarginal costs are just the difference between total costs and volume variable costs. In a cost component with declining marginal costs, increases in the cost driver caused by higher volume lead to growth in both volume variable and inframarginal costs. But this occurrence does not establish a causal relationship between individual products and the amount of inframarginal cost. Only the inframarginal costs that are part of the incremental costs for a product can be causally linked; no other inframarginal costs can be causally linked to individual products.

On page 15, UPS postulates that:

> The Postal Service's massive understatement of attributable costs allows (and even encourages) the Postal Service to set prices for its competitive products below the actual costs of those products. Specifically, the Postal Service is setting prices based on the demonstrably false assumption that the cost of *each* unit of its competitive products is only the cost of the *last* unit of production.

Contrary to the UPS claim, it is UPS making the false assertion, mixing the concept of prices with the concept of costs. The Postal Service does not set its market dominant or competitive product prices equal to their marginal costs. Rather, it uses marginal costs as the starting point for setting prices. The Postal Service and the Commission are both well aware that, in order to cover its total costs, the Postal Service needs to set its prices above its marginal costs. This is not news.[9] But the fact that prices need to be set above marginal costs does not mean either the Postal Service and the Commission are assuming that all units "cost the same as the last unit."

Along the same vein, on page 15, UPS asserts:

> More broadly, the Postal Service's failure to attribute inframarginal costs to competitive products effectively gives to those products nearly all of the cost savings of the Postal Service's economies of scale and scope. Competitive products are only required to bear the lowest variable costs — marginal costs. Captive mail customers are left to pay for the more expensive variable costs. This cost-accounting approach effectively gives competitive products nearly a free ride on a network funded by captive mail customers. In addition to unfairly burdening those mail customers, this approach allows the Postal Service to be far less efficient than its private competitors, while setting prices in ways those private competitors would find impossible. This type of conduct fundamentally distorts competition, and it is precisely what Congress sought to avoid in PAEA.

This paragraph contains errors and unverified assertions on so many levels that it seems more an exercise in polemics than a rational argument for a change in cost methodology.

The first sentence claims that by calculating the marginal cost of its competitive products, the Postal Service is somehow "effectively" giving those products nearly all the cost savings from economies of scale and scope. However, the Postal Service calculates the marginal costs of all products, not just competitive products. Calculating

[9] In fact, UPS draws the same conclusion. *See* Proposal One at 19 fn.19.

the marginal costs of competitive products does not "give" those products any more of the savings from scale and scope economies than calculating the marginal cost of market dominant products "gives" those products savings from scope and scale economies. In fact, marginal costs give all products <u>the exact amount</u> of "savings" from scale and scope economies that they actually "deserve." That is because marginal costs embody the actual amount of cost caused by an additional unit of each product under scale and scope economies. Unlike UPS's proposed costing method, marginal costs accurately reflect the true nature of cost incurrence.

The second sentence includes another false and unsubstantiated claim: that competitive products only "bear" their marginal costs. This would be true only if the Postal Service set its prices for competitive products equal to marginal costs, which it does not do. As UPS is well aware, competitive products are currently required to collectively cover at least 5.5 percent of institutional costs; that requirement, by itself, ensures that those products "bear" more than their marginal costs.[10] This fabrication is repeated in the third sentence where UPS again claims that competitive products somehow get a "free ride" on the Postal Service network, even though UPS admits elsewhere that competitive products, as a group, cover their incremental costs.[11] *See,* UPS Proposal One at 10-11. Competitive products get no more of a "free ride" than do market dominant products. This wild claim is compounded by the false assertion that

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[10] Indeed, in recent years the Postal Service has exceeded the minimum requirement by a factor of more than two – the FY 2015 ACR at page 69 indicates that the percentage of FY 2015 institutional costs covered by Competitive products was 13.3 percent.

[11] As the Postal Service observed in its response to Question 1 of Chairman's Information Request No. 6 (January 8, 2016), the incremental cost of competitive products as a group exceeds the sum of the incremental costs of the competitive group's constituent products. Thus, product-level incremental costs are not necessary to conclude that market dominant products do not cross-subsidize competitive products.

"captive" mailers "fund" the network. While UPS is presumably referring to market dominant products, this claim again ignores the fact that the Postal Service uses the same costing methodology for determining the attributable and incremental costs of both market dominant and competitive products.

The next two sentences imply that calculating marginal costs somehow allows the Postal Service to engage in nefarious pricing activities, in a way that its private sector competitors could not. Obviously, the Postal Service's competitors could also calculate marginal costs. The only apparent implication of UPS's assertion is that the Postal Service is cross-subsidizing its competitive products by setting their prices below their incremental costs. But the Postal Regulatory Commission has consistently found, in its annual compliance determinations as well as *ex ante* product and pricing reviews, that no such cross-subsidy is taking place.

More directly addressing the alleged merits of Proposal One, UPS claims on page 20:

> By using the distribution keys to distribute some variable costs to individual products, the Postal Service effectively acknowledges that the keys are sufficiently reliable to attribute variable costs to products "through reliably identified causal relationships."

This claim, however, relies on an unwarranted leap in logic. The fact that the Postal Service uses distribution keys to distribute volume variable costs to product does not mean that distribution keys are "sufficiently reliable" to distribute inframarginal costs, or common costs, or fixed costs, to individual products. These latter types of costs are not causally linked to individual products, and using the distribution keys to allocate them is an exercise in arbitrary and inaccurate fully-distributed costing.

At its core, as Professor Bradley demonstrates, Proposal One is simply an attempt to rationalize yet another variation of fully-distributed costs. Both Congress and the Supreme Court have emphatically rejected such an approach to costing, and UPS has presented no coherent justification for the Commission to reverse course and now embrace a proposal that is so fundamentally at odds with the economic and ratemaking principles upon which the Commission has relied for decades.

III. PROPOSAL TWO IS UNSUPPORTED BY ACCEPTABLE ANALYSIS AND ENTIRELY INCONSISTENT WITH APPROPRIATE COSTING PROCEDURES

Proposal Two advanced by UPS has even less substance than Proposal One, which has virtually none. As Professor Bradley shows, it has no basis in postal operations, economic theory, or econometric practice. Bradley Analysis at 39-61. It is a weak attempt to arbitrarily assign additional institutional costs to products, without a causal basis. Proposal Two is predicated upon the incorrect assumption that institutional costs are necessarily fixed in the textbook sense. Just as it did in Proposal One, UPS fails to recognize the essential difference between single-product firms and multiproduct firms. In multiproduct firms like the Postal Service, both fixed and variable costs can be common, and thus not caused by any individual product. Common costs should not be attributed to products.

It is ironic that UPS starts its discussion (Proposal Two at 1) with the statement that the Postal Service "should not be permitted to treat costs as 'fixed' unless it can demonstrate that they are, in fact, fixed, using sound econometric methods," when UPS has put forth an econometric exercise that comes nowhere close to the standards set by the Commission. Dr. Neels's econometric "model" has only one right-hand-side variable, and that is a constructed variable of dubious value. To make matters worse, the model is based upon only eight data points. That should be enough, in and of itself, to disqualify Proposal Two.

UPS makes the mistake of concluding that just because institutional costs do not change in response to variations in current volumes, then they also must not change through time. This is erroneous, because one would expect institutional costs to change through time, as the Postal Service changes operational methods, modifies its networks, changes its service standards, or makes other management changes. It is quite possible that volume could be also changing concurrently with institutional cost changes, but such an outcome does not mean that the change in volume caused the change in institutional costs.

UPS's Figure 2-1 (at page 5) shows institutional costs falling between 2007 and 2010 and then rising from 2010 through 2014. Throughout the same period, the figure shows that UPS's measure of aggregate volume declines persistently. This means that during the first half of the period, institutional costs were falling when volume was falling, but during the second half of the period, institutional costs were rising when volume was falling. This alone belies UPS's claim of a reliable linkage between volumes and institutional costs.

The analysis supporting Proposal Two relies upon a three-step process, and all three steps contain disqualifying defects. Bradley Analysis at 39. The three steps are:

- First, identify certain cost components as containing "fixed costs" and hypothesize they contain "hidden" variable costs.
- Second, run a set of simple regressions relating these components' institutional costs to a measure of aggregate volume to see which ones are "really" fixed and which are "hidden" variable costs.

- Third, use individual products' shares of attributable costs in the <u>previous</u> year to allocate identified "hidden" variable cost to products.

The first step is invalid because it relies upon a faulty classification of costs. Bradley Analysis at 39. Dr. Neels apparently did not actually investigate the individual cost components he analyzes, but simply followed a previous analysis conducted by Dr. McBride in assuming that any component's institutional costs which were not classified as inframarginal for the purpose of the incremental cost model were "fixed." But, in many instances, the components Dr. Neels analyzed contained institutional costs arising from a detailed variability analysis applied to a larger set of costs. The variability analysis was the source of the institutional costs, not an assumption of fixity by the Postal Service. This outcome was true for the largest (in terms of cost) component that Dr. Neels identified, which contains service-wide benefit costs. *Id.* at 40-41. The Postal Service does not consider these labor costs to be fixed, in the textbook sense, so the costs that Dr. Neels incorrectly called "fixed" were really just the institutional cost portion of these benefit costs.

In other cases, the components contained labor costs that are common to all products. This was true for the second largest component Dr. Neels identified, containing labor costs arising from work by professional and technical personnel, including general administrative work. *Id.* at 41. This work includes activities for employees such as accountants and industrial engineers. While these labor costs are variable, they are also common to all products. They have a zero variability because they do not change in response to changes in the volumes of any individual products. In sum, the basic premise for Dr. Neels's fixed cost analysis is invalid, because he did not correctly identify the fixed costs required to perform his proposed analysis.

The second step is marred by substandard econometric analysis. *Id.* at 43. First, the regression model is overly simplistic, as Dr. Neels regresses his measure of fixed cost on a single variable: a measure of weighted volume. As a result, Dr. Neels's proposed regression model does not allow or control for changes in technology, regulatory shifts, management adjustments, differential labor contracts, or a multitude of other factors that could affect these costs.

Second, the variables in the model are subject to serious measurement error. As explained above, the dependent variable in the regression is flawed because it relies upon a faulty classification analysis. The independent variable is also subject to measurement error, because it attempts to add apples and oranges and produce a single measure of aggregate output for the Postal Service. Moreover, the constructed variable Dr. Neels uses is subject to inconsistent product definitions and does not accurately reflect the changing Postal Service workload through time. *Id.* at 44.

Third, all of these problems are compounded by the fact that Dr. Neels attempts to estimate the model on just eight observations. A regression based upon so few data points is fragile, is subject to influential observation problems, has low statistical power, and suffers from fitting the (thin) sample data rather than estimating a true population regression line. *Id.* at 45.

Fourth, Dr. Neels does not apply any standard econometric tests to the estimated model. He does not test for influential observations, autocorrelation, or stability. In sum, the proffered econometric analysis simply does not reach the standard of acceptable econometric practice.

These problems are not just theoretical. They lead to a substandard, unreliable econometric analysis. Professor Bradley effectively demonstrates that Dr. Neels's econometric results are fragile and produce spurious results. This is true both for Dr. Neels's aggregate analysis and for his component level analysis. Professor Bradley shows that Dr. Neels's apparent results of a statistically significant relationship between total fixed cost and total volume is spurious, and actually just reflects the difference between FY2007 and subsequent years. *Id.* at 47. Dropping just <u>one</u> observation completely overturns Dr. Neels's findings and produces a regression showing that there is <u>no</u> relationship between his measured fixed costs and total volume. Similarly, Professor Bradley demonstrates that adding a simple time trend, to control for other possible changes during the period of estimation, invalidates Dr. Neels's component level regressions. *Id.* at 51-53.

Professor Bradley shows that if one uses a model that allows for the non-linear trend (which seems to be what the data suggest), of the 88 component regressions that are estimated, only 4 produce statistical evidence supporting the possibility of the existence of variable costs. Moreover, examination of the four components shows that they suffer from the misclassification error discussed above, and are not fixed costs. In addition, the examination of the nature and sources of these costs shows them to be institutional. Fundamentally, any effort to use Dr. Neels's approach as a basis for allegedly finding these costs to be "variable" cannot provide a justification for allocating them to individual products.

The third step in the analysis is the allocation of any identified hidden variable costs to products. To follow the established methodology, such an allocation should be based upon a causal relationship between the cost and the products' volumes using both the component's estimated variability and the relevant distribution key. Dr. Neels's proposed method uses neither. He ignored the variabilities associated with his component level regressions, perhaps because they are so extreme. Professor Bradley shows that even a small sample of Dr. Neels's component level regressions produces variabilities as large as 327.4 percent. *Id.* at 56-57. Instead of using the estimated variabilities, Dr. Neels, without justification, simply allocates all of what he claims to be a component's "hidden variable" cost to products.

When distributing cost to products, the established methodology relies upon identifying the proportion of the cost driver required by each product and then using that proportion to distribute the costs. Because Dr. Neels has not identified any cost drivers for the components he investigates, he could not apply the standard approach. Instead, he proposed distributing these costs on an arbitrary basis. For example, for components which originally had a zero variability, Dr. Neels proposes distributing the component's cost costs to products on the basis of their relative shares of overall attributable costs in the previous year. *Id.* at 55. He provides no justification as to why using the proportions of overall attributable costs is appropriate for an individual cost component. Nor does he provide any justification for why using costs from a previous year is appropriate. Obviously, Dr. Neels is providing an arbitrary and unsupported basis for distributing these costs. Once again, the ineluctable conclusion that follows is that Proposal Two is simply a thinly-disguised version of fully-distributed costing.

As with Proposal One, the justifications proffered by UPS to rationalize Proposal Two do not withstand scrutiny. On page 3, UPS claims:

> For over four decades, however, the Postal Service has classified costs as "fixed" largely by a subjective process whereby Postal Service personnel opine on the "tendency" of a particular cost to remain fixed in light of changes in volume.

This astounding statement is based solely upon a partial quotation from the 1971 rate case, as if the Postal Service costing methods 45 years later are the same as they were in the very first rate case. This claim by UPS ignores all of the work done to determine which costs were attributable and which costs were institutional by the Postal Service, the Commission, and intervenors like UPS, in Docket Nos. R74-1, R80-1, R84-1, R87-1, R90-1, R94-1, R97-1, R2000-1, R2001-1, R2005-1, and R2006-1. It also ignores all of the Annual Compliance Determinations, in which the Commission reviews the Postal Service's product cost calculations, and the many rulemakings that have been held to refine and improve the costing methodology. UPS has been an active participant in almost all of these cases. There is absolutely no basis for UPS to assert that the determination of institutional cost has been done largely by Postal Service analysts in a "subjective process."

Likewise, on page 5, UPS alleges:

> When variable Postal Service costs are erroneously treated as "fixed," those costs are erroneously not attributed to competitive products. They are instead almost always treated as institutional costs, which are borne disproportionately by the market dominant business. This creates the very subsidy that 39 U.S.C. § 3633 forbids — subsidization of the competitive products business by the market dominant business.

These statements reveal UPS's lack of understanding of the PRC/Postal Service costing methodology and further undermines the credibility of Proposal Two. The PRC/Postal Service costing approach does not first identify fixed costs and then treat them as institutional. As the Postal Service noted in its response to ChIR No. 2, Question 4 (Dec. 10, 2015), there is no need to identify "fixed" costs in the current costing methodology. Instead, accrued costs are carefully analyzed to identify which costs are attributable and which costs are institutional. Institutional costs may be a mixture of textbook variable and textbook fixed costs, but the distinction is unimportant for calculating product costs. The key point is that institutional costs are not caused by individual products.

Next, UPS compounds its error by claiming that institutional costs are borne disproportionately by market dominant products, creating a cross-subsidy for competitive products. This, too, is false, as the Commission requires the Postal Service to test competitive products for cross-subsidy each and every year. In all years since the PAEA has been in place, revenues for competitive products have been more than sufficient to cover their incremental costs, meaning that competitive products are not receiving a cross-subsidy from market dominant products.

To summarize, every aspect of Proposal Two is fatally flawed. In the established PRC/Postal Service costing procedures, the determination of accrued costs as either attributable or institutional is done on a component-by-component basis, taking into account the functional nature of the cost in individual components. In its rush to elevate the amount of costs attributed to Competitive products, UPS wants to bypass such careful analysis and paint large swaths of costs with the same brush. The analysis presented to support such an approach is woefully inadequate, and the result would be cost attributions that do not meet the statutory criterion for reliable causal analysis. Such a costing procedure could not support rational economic decision-making.

IV. NEITHER THE FACTS NOR UPS'S FAULTY EVIDENCE SUPPORTS ITS CENTRAL NARRATIVE ABOUT THE EFFECTS OF COST ALLOCATION ON COMPETITIVE PRODUCT PRICING

UPS peppers its filings with impassioned rhetoric that caricatures the Postal Service as a craven monopolist abusing cost accounting principles to prey on consumer and competitor alike. *E.g.,* UPS Petition at 1-6. The facts tell a different story, however. A closer look at the Postal Service's pricing history and the fundamentally flawed data that UPS has filed actually refutes, rather than supports, UPS's own narrative about market distortions. The true picture is one of significant price increases, not decreases, for competitive products, and of various factors contributing to any market share shifts, such as the distinct possibility of UPS falling victim to its own pricing decisions, rather than the Postal Service's.

A. Competitive Product Prices Have Increased More Than Market Dominant Product Prices, Not the Other Way Around

UPS has things exactly backward when it asserts that, "[w]hile captive mailers are paying significantly increased prices and experiencing reduced service standards, the Postal Service is slashing prices of its competitive products to drive up its market share." *Id.* at 5. In reality, market dominant product prices have grown by a cumulative (compounded) 23.1 percent since the PAEA took effect (including seven CPI-based increases and the temporary exigent surcharge). By way of comparison, nine price adjustments between May 11, 2008, and January 17, 2016, have raised Priority Mail prices by a cumulative 39.0 percent. These included two substantial increases: 6.3 percent in January 2013 and 9.8 percent in January 2016. The next two largest competitive products by volume, Parcel Select Lightweight and First-Class Package Service, saw cumulative price increases of 78.5 percent and 32.8 percent, respectively, since their transfers from the market dominant products list to the competitive products list in FY2012. Far from being "slashed," competitive product prices have "significantly increased" more than those paid by what UPS calls "captive mailers."

In an effort to bolster its claim, UPS focuses on a subset of Priority Mail prices that decreased in September 2014. *Id.* at 6; United Parcel Service, Inc.'s Response to Chairman's Information Request No. 1, PRC Docket No. RM2016-1 (updated Dec. 15, 2015) [hereinafter "UPS ChIR 1 Response"], at 9-16. Those price decreases were balanced by price increases in other price cells, such that the weighted-average Priority Mail price changed by 0 percent (retail prices increased by 1.7 percent, while commercial prices decreased by 1.4 percent). Priority Mail has more than 2,000 price cells, and the ones that decreased in September 2014 account for only a small fraction of both Priority Mail's total volume and its subsequent year-over-year volume growth. The Postal Service has since imposed a sharp increase in Priority Mail prices: 9.8 percent in January 2016, including increases in the specific price cells at issue. Moreover, it means little to compare list prices between the Postal Service, UPS, and FedEx:[12] a far greater proportion of Postal Service customers pay list prices, whereas the overwhelming majority of UPS and FedEx customers pay undisclosed but discounted negotiated rates.[13] Whatever the effect of the September 2014 price change, a recent pricing decision limited to select price cells within a single product does not support UPS's sweeping generalization of "significantly increasing" prices for

[12] *See* UPS ChIR 1 Response at 9-10 (citing Laura Stevens, *U.S. Mail Cuts Prices, Chafing UPS and FedEx*, WALL ST. J. (Sept. 4, 2014), http://www.wsj.com/articles/u-s-mail-cutting-rates-to-win-e-commerce-business-1409850185).

[13] *See* Rob Martinez, *2015 Parcel Pricing & Benchmarking Survey: Live Parcel Forum Results Unveiled*, PARCEL (Nov.-Dec. 2015), at 5, http://www.parcelindustry.com/file-224-Survey2015.pdf.

"captive mailers" while "slashing" competitive product prices, especially not when the full history of post-PAEA Postal Service pricing is taken into account.

B. Shifts in Market Share Cannot Be Attributed Solely to Postal Service Pricing, in Light of UPS's Deficient Data and Other Potential Causes

UPS overreaches in its zeal to blame its perceived market share woes on a single Postal Service price change. For starters, a basic flaw renders meaningless the "Market Share Analysis" data that UPS filed in response to Chairman's Information Request No. 5. UPS attempts to contrast Priority Mail volumes with a combination of UPS and FedEx volumes for each quarter. However, FedEx uses a different quarterly calendar than do UPS and the Postal Service. For instance, FedEx splits the November-December holiday season across two separate quarters, whereas both months fall within the same quarter for UPS and the Postal Service.[14] The effect is a material skew in UPS's data. FedEx's December volumes are shifted into the Postal Service's Q2, with the result that FedEx's volumes (as well as combined UPS/FedEx volumes and total market volumes) appear to be artificially low in postal Q1 and artificially high in postal Q2: indeed, FedEx's volumes are higher in postal Q2 than in postal Q1 for both fiscal years shown. *Id.* cells F33-G33, J33-K33. This flaw unduly inflates the Postal Service's share of purported total volumes in FY2015 Q1 and UPS/FedEx's share in FY2015 Q2. Without presentation of apples-to-apples data, it is impossible to rule out the possibility that any apparent market share contrasts in these quarters have more to do with flaws in the data itself, and less to do with UPS's narrative about the Postal Service's September 2014 price change or the supposedly

[14] Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cells A25-M30, *filed with* United Parcel Service, Inc.'s Response to Chairman's Information Request No. 5, PRC Docket No. RM2016-1 (Jan. 8, 2016) [hereinafter "UPS ChIR 5 Response"].

"minimal" impact from UPS's and FedEx's expansion of Ground dimensional weight pricing in FY2015 Q2.

Apart from that central flaw, UPS's "Market Share Analysis" data offer an incomplete picture of the competitive package delivery market. Priority Mail, which competes with both ground and 2- and 3-day air offerings, is contrasted solely with UPS and FedEx Ground services. UPS's attempts to invoke external authorities for excluding 2- and 3-day air services, UPS ChIR 5 Response at 1-2, amount to little more than self-citation in at least one instance.[15] More importantly, though, UPS's citations are beside the point: while all sources agree that Priority Mail competes with private ground services, that does not necessarily mean that Priority Mail does not <u>also</u> compete with 2- and 3-day air services. In fact, various sources attest to the notion that Priority Mail is comparable to both service modes, including an earlier Morgan Stanley report co-authored by the same lead analyst as the one that UPS cites.[16] Thus, shifts in volume numbers in UPS's spreadsheet mean little, so long as data for an entire comparator market segment are excluded and the possibility exists that volume is

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[15] William J. Greene et al., *United Parcel Service: Leveling the Parcel Playing Field* (Morgan Stanley Research 2015), at 1 ("At recent meetings with UPS's management team, we discussed a wide array of topics[.] . . . We detail [UPS management's] key points as well as our takeaways in this report[.]"), *cited in* UPS ChIR 5 Response at 2 fn.3.

[16] William J. Greene & Heeten H. Doshi, *Transportation: USPS Is Becoming a More Serious Competitor to UPS and FedEx* (Morgan Stanley Research 2007), at 2, 3, http://www.morganstanley.com/institutional/research/pdf/IAIRNPF200703271.pdf (describing Priority Mail as the Postal Service's "'2-3 day' product" comparable to UPS and FedEx ground services, but also "in some instances [to] UPS and [FedEx]'s deferred air products," and comparing Priority Mail service quality with both air and ground services by UPS, FedEx, and DHL). *See also* Ina Steiner, *FedEx Powers Much of USPS Air Service Including Priority Mail*, ECOMMERCEBYTES (June 17, 2014), http://www.ecommercebytes.com/cab/abn/y14/m06/i17/s01; Angela Greiling Keane, *U.S. Postal Sees $500 Million from Priority Mail Changes*, BLOOMBERG BUSINESS (Aug. 14, 2013), http://www.bloomberg.com/news/articles/2013-08-14/u-s-postal-sees-500-million-revenue-from-priority-mail-changes (quoting an industry analyst's prognosis that, with new features, Priority Mail "could draw volume away from FedEx and UPS from their two-day and three-day deferred air express services and ground service").

shifting not only among the included categories, but also between included and excluded categories.

It also bears noting that, without explanation, UPS apparently deems FedEx's joint service SmartPost – which relies on the Postal Service's Parcel Select service – worthy of inclusion with FedEx's "ground" data,[17] yet UPS confines the Postal Service's "ground" data to a single product, Priority Mail.[18] This has a material effect on UPS's data. The volume pattern for FedEx SmartPost does not align with that for FedEx Ground, *compare id.* cells C9-R9 *with id.* cells C20-R20, and so the inclusion of SmartPost appears to have the effect of depressing the apparent changes in FedEx's volume growth and market share: for instance, every figure for "UPS/FedEx Growth" would increase (by 0.3 to 2.0 percent) if FedEx SmartPost were omitted from consideration, and many of the "UPS/FedEx Share Growth" figures would improve (including a reversal in the direction of the carriers' FY2015 Q4 market share change, from -0.7 percent to 0.7 percent).[19] UPS's unexplained decision to include such expanded ground offerings on the UPS/FedEx side of the ledger introduces material skew in UPS's data.[20]

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[17] *See* Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "FDX Quarterly Data," cells A29-S29 (summing FedEx Ground and FedEx SmartPost volumes).

[18] To be clear, the Postal Service is not proposing that other services ought necessarily be included in the Postal Service data. Rather, the point here is that it is debatable whether and how joint services ought to be included in the analysis at all. Doing so selectively, as UPS has done, skews the data one way, but doing so for the Postal Service as well might introduce double-counting and other conceptual problems. An apples-to-apples approach might focus exclusively on comparable services exclusive to each carrier.

[19] To view the effect of this, see *id.*, tab "PM_GND Market," cells H40-L40 and H46-M46, and compare the results when the reference for cells D33-L33 is changed from tab "FDX Quarterly Data," row 29 to row 9. (Data for FY2015 Q4 appear not to differentiate between FedEx SmartPost and other FedEx Ground volume.)

[20] UPS's data are not similarly explicit about UPS SurePost, but the financial reports that underlie the data suggest that SurePost is included in UPS Ground volume statistics. *See, e.g.*, United Parcel Service, Inc., Annual Report Pursuant to Section 13 or 15(d) of the Securities and Exchange Act of 1934 for the Fiscal Year Ended December 31, 2014 (2015), at 30 ("The increase in ground volume in 2014 was driven

Moreover, even assuming that UPS's data have any validity whatsoever, they would not necessarily tell the story that UPS tries to make them tell. Despite UPS's strenuous efforts to make the September 2014 price change the sole cause of certain trends, UPS's data actually amplify, not disprove, the possibility of confounding causal factors, such as a record-breaking holiday season, UPS and FedEx's expansion of Ground dimensional weight pricing, and even the carriers' service performance in the prior year's holiday season.

Even if, as UPS claims, "volume growth declines for UPS and FedEx coincided closely with the Priority Mail rate decreases" (although, as explained above, this cannot actually be gleaned from UPS's data), UPS would still be off the mark in claiming that "they did not coincide with either the announcement or the implementation of expanded dimensional weight pricing." UPS ChIR 5 Response at 4. Two things are wrong about this quote, which purports to discuss market trends in FY2015 Q1. First, UPS's own data indicate that UPS and FedEx's Ground volume growth did <u>not</u> decline in that quarter: the carriers' year-over-year Ground volume growth rose to 6.5 percent in FY2015 Q1, compared with 5.7 percent and 5.2 percent in FY2014 Q3 and Q4, respectively. Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cells H39-J39. Even after removing the distortionary FedEx data, the same pattern holds for UPS Ground: 8.9 percent year-over-year growth in FY2015 Q1, compared with 8.1 percent and 7.7 percent in FY2014 Q3 and Q4, respectively. *Compare id.* cells F32, J32, *with id.* cells D32-E32, H32-I32. (UPS did not provide data

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by our SurePost service offering, which had a volume increase of more than 45% for the year[.]"). Because UPS does not report SurePost data separately, it is impossible to determine the effect of its inclusion. Given its comparability to FedEx SmartPost, however, it is quite possible that the UPS SurePost data similarly skews the carriers' volume and market share trends.

that would allow comparison of year-over-year growth rates in FY2014 Q1 or Q2.) Second, the carriers' year-over-year Ground volume growth did decline sharply in FY2015 Q2: the very quarter in which they implemented expanded Ground dimensional weight pricing.[21] The sustained lower rates of Ground volume growth in FY2015 Q3 and Q4[22] could just as easily bespeak the effects of "delayed implementation" and "waivers," UPS ChIR 5 Response at 4-5, not to mention the rolling expiration of preexisting customer contracts, as anything else. Indeed, in a survey of 77 parcel shippers, 73 of which use UPS or FedEx as their primary carrier, more than one in five reported to have diverted volume away from UPS and FedEx in an effort to "mitigate" the effects of newly expanded Ground dimensional weight pricing. Rob Martinez, *2015 Parcel Pricing & Benchmarking Survey: Live Parcel Forum Results Unveiled*, at 8.[23] This finding seems at odds with UPS's claim that the impact of expanded Ground dimensional weight pricing has been "minimal." UPS ChIR 5 Response at 4.

Since UPS and FedEx's year-over-year volume growth did not actually decline in FY2015 Q1, then something else would have to explain any possible gains in the Postal Service's share of the overall "market."[24] UPS's data suggest that the whole "market" (according to UPS's limited definition) experienced a surge in the FY2015 Q1 holiday season. In that quarter, total volumes rose 17.9 percent above the previous quarter and

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[21] *Compare* Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cells K39, *with* UPS ChIR 5 Response at 4. To observe the same pattern for UPS Ground only, without the distortionary FedEx data, see cells G32 and K32 of the spreadsheet.

[22] Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cells L39-M39. For a more valid comparison of UPS-only data, see *id.* cells H32-I32, L32-M32.

[23] The Postal Service has confirmed with the survey taker, Shipware, LLC, that the relevant bar on the graph is mislabeled as "11.5%"; consistent with the Y-axis scale, the correct value is 21.5 percent.

[24] Again, leaving aside the fundamental lack of validity in UPS's claims about market share trends, due to FedEx's staggered fiscal quarters.

7.5 percent above the same quarter the previous year.[25] As further indication of seasonality, the return to a rest-of-year norm in Q2 was stronger in FY2015 as well: -10.3 percent in FY2015, versus -6.8 percent in FY2014. *Compare id.* cells J36-K36 *with id.* cells F36-G36.[26] Indeed, for the rest of FY2015, total volumes remained only 3.0-3.4 percent higher than in the same period of FY2014. *Compare id.* cells L36-M36 *with id.* cells H36-I36.[27] This indication of a particularly strong holiday season is broadly consistent with reports of record levels of both total U.S. retail sales and online sales during the FY2015 holiday season.[28] Of course, all of this is subject to the significant caveat that UPS's fundamentally flawed "market" construct offers no reliable conclusions whatsoever.

The chart below illustrates these observations, using the trends in quarterly volumes, not year-over-year volume growth, from UPS's data. This chart includes only Priority Mail and UPS Ground volumes, so as to eliminate the confounding effect of FedEx's staggered fiscal quarters.[29] Presented in this fashion, it is apparent that (1) UPS Ground volumes followed a consistent Q2-Q4 trend-line in FY2013 and

[25] *Compare* Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cell J36, *with id.* cells F36, I36. Of course, this upswing might be even starker if FedEx's December volumes were included in FY2015 Q1. Without FedEx's distortionary data, combined FY2015 Q1 UPS Ground and Priority Mail volumes rose 22.7 percent over the previous quarter and 9.7 percent over FY2014 Q1. *Compare id.* cells J32, J35 *with id.* cells F32, F35, *and* I32, I35.

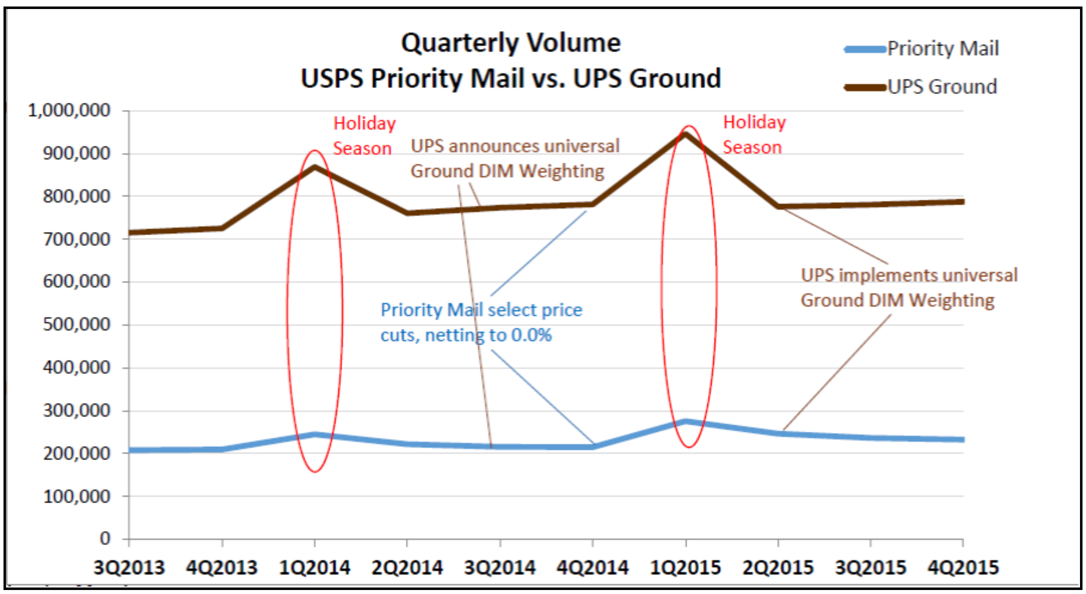
[26] The remark in the previous footnote about allocation of FedEx's volumes applies to this downswing as well. Without FedEx volumes, the FY2015 Q2 drop in combined UPS Ground and Priority Mail volumes was -16.3 percent, compared with -11.8 percent in FY2014 Q2. *Compare id.* cells J32-K32, J35-K35, *with id.* cells F32-G32, F35-G35.

[27] Without FedEx volumes, combined UPS Ground and Priority Mail volumes were 2.4-2.8 percent higher. *Compare id.* cells L32, L35, *with id.* cells H32, H35, *and id.* cells M32, M35, *with id.* cells I32, I35.

[28] Press Release, National Retail Federation, Retail Holiday Sales Increase 4 Percent (Jan. 14, 2015), https://www.nrf.com/news/retail-holiday-sales-increase-4-percent.

[29] In other words, the underlying data are taken from Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," rows 32 (UPS Ground) and 35 (Priority Mail), and not row 33 (FedEx Ground) or 34 (UPS/FedEx).

FY2014, (2) UPS experienced a stronger Q1 in FY2015 than in FY2014, with seasonal gains above where the slope of the Q2-Q4 trend-line might have predicted, and (3) UPS experienced a slight downward level shift and a slight flattening of the trend-line in FY2015 Q2-Q4, compared with FY2014 Q2-Q4. This pattern is a poor fit with UPS's narrative of a market shift in response to the September 2014 price change, but not in response to UPS's expansion of Ground dimensional weight pricing. To the contrary, to the extent that the data pattern corresponds to anything, it fits far better with reports of a strong FY2015 holiday season and customers' response to UPS's implementation of expanded Ground dimensional weight pricing in FY2015 Q2.



Even if UPS showed – as its invalid data have thus far failed to do – that the FY2015 holiday bump might not have been evenly distributed among the three carriers, this could stem from a number of factors. In general, the Postal Service tends to do comparatively well in every first quarter due to its larger retail presence; during the holidays, many households and other retail shippers substantially increase their shipping activity to send gifts to family and friends. In FY2015 Q1, the September 2014 price change could be part of the picture, but so could such other factors as the Postal Service's marketing and advertising of its flat-rate options, UPS and FedEx customer shifts in anticipation of dimensional-weight pricing, and even customers' reported disappointment with UPS and FedEx performance during the previous holiday season.[30] UPS has offered no evidence that warrants sole or even prevailing attribution of responsibility for any supposed market shift (which, again, has yet to be demonstrated by reliable evidence) to the Postal Service's limited price decreases.

Even assuming that UPS's flawed data did suggest growth in Priority Mail's share of the actual market, this product-wide market share growth would not necessarily be attributable only to price decreases in specific price cells. In fact, in the three fiscal quarters after the September 2014 price change (i.e., FY2015 Q1-Q3), the price cells that decreased only accounted for a minor fraction of Priority Mail volume and year-over-year volume growth. The majority of Priority Mail's success must be due to other causes, such as the popularity of the Postal Service's innovative product options and customers' responses to FedEx and UPS's own pricing decisions and service performance.

Finally, even on the basis of UPS's flawed data, UPS's overarching complaints about market share are overblown. By FY2015 Q4, Priority Mail's share of the UPS-defined "market" had slackened to 16.0 percent, as might be expected from the general seasonality trend. That is essentially where UPS's data has it two years earlier (15.6

[30] *E.g.*, Steve Banker, *UPS Holiday Season Fiasco: A Failure of Strategic Planning*, FORBES (Dec. 30, 2013), http://www.forbes.com/sites/stevebanker/2013/12/30/ups-holiday-season-fiasco-a-failure-of-strategic-planning; *UPS, FedEx Draw Fire After Christmas Delivery Problems*, NBC NEWS (Dec. 25, 2015), http://usnews.nbcnews.com/_news/2013/12/25/22047875-ups-fedex-draw-fire-after-christmas-delivery-problems (reporting, among other things, several shippers' resolutions to cease using UPS).

percent in FY2013 Q4), before the September 2014 price changes.[31] Thus, even if valid data showed similar trends to the data that UPS has filed to date, UPS's fixation on the Postal Service's price change would be confounded by several coinciding real-world circumstances: a strong FY2015 holiday season that grew the entire package shipping market, various factors that may have contributed to shifting more volume than usual to the Postal Service, and UPS and FedEx's expansion of Ground dimensional weight pricing, which would have shifted further volume in the remainder of FY2015. The data further suggest that the effect of these developments may be transitory, and that, in many respects, market trends may be easing back to pre-FY2015 levels.

For all of these reasons, UPS's data fail to support its hypothesis that abnormal shifts in volume and market share occurred in FY2015 Q1. Even if they did, that would not prove that those shifts were solely attributable to the Postal Service's September 2014 price change, to the exclusion of any other factors. It should be emphasized, however, that <u>basic flaws in UPS's data render it incapable of depicting anything about the relevant market</u>, much less supporting UPS's hypotheses about the causes of any theoretical volume or market share shifts.

V. UPS'S DISCUSSION OF "SUBSIDIES" IS ONE-SIDED AND RELIES ON FLAWED ANALYSES

Although much of UPS's other rhetoric seems aimed at setting the stage for a future proceeding on Proposal Three, preliminary discussion of at least one example is warranted here insofar as it reflects on UPS's overall credibility. In response to Chairman's Information Request No. 1, Question 6, UPS claims that any benefits of the

[31] *Compare* Microsoft Excel file "CHR No 1 Market Share Analysis.xls," tab "PM_GND Market," cells E42-I42, *with id.* cells I42-M42. The same is true if the distortionary FedEx volumes are removed: Priority Mail's share of combined UPS Ground-Priority Mail volumes was 22.8 percent in FY2015 Q4, compared with 22.4 percent in FY2013 Q4. *Compare id.* cells E32, E35, *with id.* cells M32, M35.

Postal Service's legal status would have to be deducted from estimated universal service obligation (USO) costs. Beyond the fact that this is not responsive to the Chairman's question,[32] UPS's discussion is misleading in at least three ways.

First, UPS does not limit its discussion to the postal monopolies that are often linked to the USO on a policy level. Rather, UPS engages in a one-sided exposition of various "implicit subsidies" without any corresponding mention of the staggering cost of legal mandates beyond the USO. Tellingly, UPS refers only to the Federal Trade Commission's (FTC's) estimate of competitive products' legal advantages ($39-$117 million) without mentioning that, <u>as shown on the very same page of the FTC's report</u>, these advantages are swamped by $380-$782 million in legal disadvantages.[33] (Even this comparison significantly understates the net disadvantage, because the FTC failed to include several significant and expensive legal differences between the Postal Service and private employers.[34]) If anything, the FTC determined that the sort of

[32] UPS ChIR 1 Response at 23 ("Please provide an estimate of the total <u>subsidy received by competitive products from market dominant products</u> [i.e., internal cross-subsidy, not external subsidy], net of the costs associated with the Universal Service Obligation.").

[33] *Compare* UPS ChIR 1 Response at 28 fn.38 (citing Federal Trade Commission, Accounting for Laws that Apply Differently to the United States Postal Service and its Private Competitors (2008) [hereinafter "FTC Report"], at 8-9) *with* FTC Report at 8. The same point applies to UPS's selective quotation of the FTC's remarks about economies of scope and scale. *Compare* UPS ChIR 1 Response at 28-29 (quoting FTC Report at 47, 51) *with* FTC Report at 10 (summarizing the conclusion that "[w]orksharing [via Parcel Select] and recent PRC regulations requiring contribution to institutional costs may reduce any advantage the USPS's postal monopoly provides it in the delivery of competitive products"), *id.* at 49 ("Any scope economies that the USPS enjoys may naturally flow from market conditions relating to universal mail service. To the extent that universal mail service is best characterized as a natural monopoly, scope economies accruing to only one firm is merely the natural outcome of the market process." (footnote omitted)), *id.* at 50-51 ("Even if economies of scope are an artificial advantage, however, they may no longer provide a substantial benefit to the USPS [due to Parcel Select worksharing and the PAEA's requirement that competitive products contribute an 'appropriate share' toward institutional costs]." (footnote omitted)); *see also* FTC Report at 48 fn.239 (noting that private carriers may "realize some scope economies that the Postal Service cannot realize," due to their ability to engage in a wider array of geographic and product markets).

[34] For example, the FTC counted the Postal Service's inability to access prescription drug subsidies under Medicare Part D, but it overlooked federal employee health benefits' lack of integration with Medicare Parts A and B, as well as various multi-billion-dollar differences in retirement benefits and workers'

comprehensive accounting that UPS apparently desires would likely show that the Postal Service's competitive product prices are artificially high, not artificially low:

> The magnitude of these subsidies is significantly smaller than the USPS's estimated economic burdens. . . . Based on the estimates above, the USPS's unique legal status appears to cause it to suffer a net competitive disadvantage relative to its private competitors. . . . Thus, even if the USPS were required to account for the value of the implicit subsidies that we have estimated, its legal constraints still would cause it to incur costs that are $213-$743 million higher than they might otherwise be[.] . . . Due to higher costs, the USPS's legal constraints are likely to cause it to charge higher prices for competitive products than it would otherwise.

FTC Report at 58, 64 (emphasis added). If a full range of "implicit subsidies" ought to be factored into the equation, as UPS suggests, then so, too, should a correspondingly full range of legal burdens.

Second, UPS obscures the matter at hand by using irrelevant value estimates of the letter and mailbox monopolies. UPS ChIR 1 Response at 27-28. With respect to the letter monopoly, competitive products are statutorily barred from including any matter or service subject to the letter monopoly, 39 U.S.C. § 3642(b)(2); put another way, the letter monopoly does not affect any private entity's ability to carry matter similar to the Postal Service's competitive products. Thus, competitive products receive **$0** in direct benefits from the letter monopoly.[35] To be sure, competitive products can theoretically benefit from the mailbox monopoly, to the extent that they are placed in

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compensation. *Compare* FTC Report at 39, 56 *with* United States Postal Service Reply Comments, PRC Docket No. PI2014-1, at 6-7; Library Reference PRC-LR-PI2014-1/1, Postal Service Analysis of Additional Postal Service Activities That Could Qualify for Reporting Under 39 U.S.C. § 3651(b)(1)(C), at 4-10, 12-14.

[35] Some arguable "indirect" benefits might exist in the form of economic efficiencies arising from the Postal Service's universal service network, which is supported by the monopolies. To the extent that this might be the case, the Postal Service is unaware of any effort to quantify the amount of these economies arising specifically from the monopolies (and not from the universal service obligation) and redounding specifically to the benefit of competitive products. Nor is it clear what purpose such an exercise would serve, in light of the fact that competitive products compensate for the value of network efficiencies by contributing an "appropriate share" of institutional costs.

mailboxes. However, the Commission's official estimate of that monopoly's standalone value ($770 million in FY2014),[36] is far less than the combined-monopolies value estimate that UPS invokes, a figure that the Commission declined to adopt in any event.[37] Of course, $770 million is only the mailbox monopoly's total value; the portion that could be allocated to competitive products would be far smaller, if not altogether $0.[38]

Finally, UPS gains nothing by referencing an eye-popping $18 billion "subsidy" value estimate by Robert Shapiro, in a paper that UPS itself commissioned.[39] This is not the appropriate forum for an exhaustive disproof of Dr. Shapiro's paper, but a few key examples should illustrate its fallacies.

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[36] Postal Regulatory Commission, Annual Report to the President and Congress: Fiscal Year 2015 (Jan. 6, 2016) [hereinafter "PRC FY2015 Annual Report"], at 48.

[37] The figure in question here is UPS's erroneous claim that "[t]he letter monopoly has been valued as conferring over $7 billion in benefits to the Postal Service." UPS ChIR 1 Response at 28 (citing Postal Regulatory Commission, Report on Universal Postal Service and the Postal Monopoly (Dec. 19, 2008) [hereinafter "USO Report"], at 143-47). For one thing, that purported figure relates to the value of <u>both monopolies combined</u>; the Commission did not estimate the standalone value of the letter monopoly. USO Report at 146 ("GMU estimates that eliminating <u>both monopolies</u> would reduce the Postal Service's profits within the range of $0.06 billion to $7.10 billion." (emphasis added)); *see also* PRC FY2015 Annual Report at 48 fn.121 (explaining that the standalone value of the letter monopoly is not estimated). In any event, UPS's figure relates to the upper bound of estimates that GMU experts provided to the Commission in 2008. Those experts themselves noted that a better estimate would be half that amount ($3.48 billion). USO Report at 146. Although the Commission's estimate rose to $4.61 billion in FY2014, it remains far lower than UPS claims. PRC FY2015 Annual Report at 48.

[38] The Commission's estimation methodology depends on the amount of volume deemed "contestable," that is, subject to diversion to a hypothetical competitor. The original value estimate deemed no then-current competitive products to be contestable; the Commission specifically rejected the valuation approach that the Postal Service offered, which would have included Priority Mail volumes. USO Report at 145, 149, 150-52. Even if the Commission's more recent estimates continue to treat the same mail categories as contestable, notwithstanding the intervening transfer of some of them to the competitive category (e.g., First-Class Package Service and Standard Post), these now-competitive categories would still account for only a small fraction of the mailbox monopoly's overall value. Meanwhile, the remaining 87 percent of competitive product revenue would continue to be irrelevant to mailbox monopoly valuation. *See* USPS-FY15-42, FY 2015 Revenue, Pieces, and Weight Report (Public Version), Excel file "Fy2015_RPWsummaryreport_public.xls," PRC Docket No. ACR2015 (Dec. 29, 2015).

[39] UPS ChIR 1 Response at 28 fn.38 (citing Robert J. Shapiro, The Basis and Extent of the Monopoly Rights and Subsidies Claimed by the United States Postal Service (Sonecon 2015) [hereinafter "Shapiro Paper"], at 3, http://www.sonecon.com/docs/studies/Study_of_USPS_Subsidies-Shapiro-Sonecon-March_25_2015.pdf); *see* Shapiro Paper at 2 fn.1 (acknowledging UPS's sponsorship).

One major error is that Dr. Shapiro's $18 billion "subsidy" figure relates only to the Postal Service as a whole; in contrast with the FTC's estimates, it does not represent the portion allocable to competitive products. Moreover, the overwhelming bulk of Dr. Shapiro's figure rests on his claim that the mailbox monopoly is worth nearly $15 billion, more than 19 times the Commission's official estimate. Shapiro Paper at 16. The problem is that, in contrast to the Commission's methodology, Dr. Shapiro's figure has nothing to do with the exclusion of competitors from mailboxes or the loss of profitability that would result from open access; rather, it represents the cost savings inherent in the sheer existence of centralized and curbside mailboxes, *id.* (calculating the purported $14.9 billion mailbox monopoly "subsidy" by summing the difference in Postal Service costs between centralized, curbside, and door delivery points), even though the USO would require the Postal Service to deliver to these mailboxes with or without a monopoly. Beyond this fundamentally mistaken premise, Dr. Shapiro fails to adjust his "subsidy" figure for the fact that competitive products account for only 2.6 percent of total mailpieces, let alone the fact that, among that 2.6 percent, many packages do not fit into the mailbox anyway and therefore are unaffected by the monopoly.[40] Dr. Shapiro's careless[41] and transparently partisan work product offers no

[40] Not to mention the fact that almost half of competitive packages are actually Parcel Select items, for which the Postal Service is sharing any monopoly benefits with private carrier-customers like UPS. As discussed at footnote 38 above, of course, the Commission has determined that these competitive product volumes are not properly treated as "contestable" for purposes of mailbox monopoly valuation anyway.

[41] A few other examples show that Dr. Shapiro's errors are not limited to his discussion of the mailbox monopoly: his baffling comparison of Postal Service productivity growth with that of unrelated sectors like warehousing and railroads, instead of the explicitly comparable private courier and messenger sector, *id.* at 13-14; his apples-to-oranges comparison of interest rates for largely <u>short-term</u> Postal Service debt instruments with those of <u>long-term</u> corporate bonds (and his exclusion of corporate debt instruments with lower interest than bonds), *id.* at 19-20; and his use of consumer inflation to "update" the FTC's estimate of property tax exemptions, *id.* at 21, even though the rise in consumer inflation is sharply at odds with the sharp property value declines and tepid tax rate growth during the relevant (and recessionary) period.

serious grist for consideration, certainly not in light of the FTC's and the Commission's own, far more rigorous treatment of the same subjects.

CONCLUSION

Both Proposal One and Proposal Two should be rejected in their entirety.

Respectfully submitted,

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